

L3 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:532345 CAPLUS  
DOCUMENT NUMBER: 139:90595  
TITLE: Method of resolving amlodipine racemate  
INVENTOR(S): Senanayake, Chris H.; Tanoury, Gerald J.; Wilkinson,  
Harold S.; Bakale, Roger P.; Zlota, Andrei A.  
PATENT ASSIGNEE(S): Sepracor, Inc., USA  
SOURCE: U.S. Pat. Appl. Publ., 6 pp., Cont.-in-part of Appl.  
No. PCT/US02/33894.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003130321	A1	20030710	US 2002-325686	20021220
WO 2003035623	A1	20030501	WO 2002-US33894	20021023
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

PRIORITY APPLN. INFO.: US 2001-346250P P 20011024  
WO 2002-US33894 A2 20021023

ABSTRACT:

The invention relates to methods of resolving racemic amlodipine into enantiomerically enriched compns. by precipitation with tartaric acid in the presence of a non-aqueous solvent, such as N,N'-dimethylacetamide. The molar ratio of tartaric acid to amlodipine is preferably <0.25:1.0 or >0.75:1.0. S-(-)-amlodipine D-hemitartrate dimethylacetamide monosolvate was prepared in 41% yield by the reaction of amlodipine besylate in N,N-dimethylacetamide with D-tartaric acid. This compound was treated with 1N NaOH solution in Me tert.-Bu ether to give S-(-)-amlodipine free base (with >99% enantiomeric purity).

L3 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:335084 CAPLUS  
DOCUMENT NUMBER: 138:358410  
TITLE: Resolving amlodipine racemate  
INVENTOR(S): Senanayake, Chris H.; Tanoury, Gerald J.; Wilkinson,  
Harold S.; Bakale, Roger P.; Zlota, Andrei A.  
PATENT ASSIGNEE(S): Sepracor, Inc., USA  
SOURCE: PCT Int. Appl., 19 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003035623	A1	20030501	WO 2002-US33894	20021023
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,			

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,  
PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,  
UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,  
TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,  
CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,  
PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,  
NE, SN, TD, TG

US 2003130321 A1 20030710 US 2002-325686 20021220

PRIORITY APPLN. INFO.: US 2001-346250P P 20011024

WO 2002-US33894 A2 20021023

ABSTRACT:

The invention relates to methods of resolving racemic amlodipine into enantiomerically enriched compns. by precipitation with tartaric acid in the presence

of a non-aqueous solvent, such as N,N-dimethylacetamide. The molar ratio of tartaric acid:amlodipine is preferably less than 0.25:1.0 greater than 0.75:1.0. S-(-)-amlodipine is obtained from S-(-)-amlodipine D-hemitartrate dimethacetamide monosolvate.

REFERENCE COUNT:

7

THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 1 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:619660 CAPLUS  
DN 137:303969  
TI N-pivaloyl methyl ester derivatives of amino acids for **separation**  
of **enantiomers** by chiral-phase capillary gas chromatography  
AU Abe, Iwao; Minami, Hideaki; Nakao, Yoshifumi; Nakahara, Taketoshi  
CS Department of Applied Chemistry, College of Engineering, Osaka Prefecture  
University, Osaka, 599-8531, Japan  
SO Journal of Separation Science (2002), 25(10/11), 661-664  
CODEN: JSSCCJ; ISSN: 1615-9306  
PB Wiley-VCH Verlag GmbH  
DT Journal  
LA English  
RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:39607 CAPLUS  
DN 136:96093  
TI Methods and compositions using a sibutramine metabolite or other dopamine  
uptake inhibitors for the treatment and prevention of sexual dysfunction  
IN Jerussi, Thomas P.; Senanayake, Chrisantha H.; Fang, Qun K.  
PA Sepracor, Inc., USA  
SO U.S., 21 pp., Cont.-in-part of U.S. Ser. No. 372,158.  
CODEN: USXXAM  
DT Patent  
LA English  
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6339106	B1	20020115	US 2000-662135	20000914
	US 6331571	B1	20011218	US 1999-372158	19990811
	US 2002010198	A1	20020124	US 2001-770663	20010129
	US 6476078	B2	20021105		
	WO 2002022114	A2	20020321	WO 2001-US28598	20010913
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				
	CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,				
	GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,				
	LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL,				
	PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG,				
	UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW:				
	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,				
	DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,				
	BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU	2001089062	A5	20020326	AU 2001-89062	20010913
EP	1320360	A1	20030625	EP 2001-968848	20010913
	R:				
	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				
	IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	US 2003096792	A1	20030522	US 2002-278097	20021023
	US 2003195261	A1	20031016	US 2003-395298	20030325
PRAI	US 1999-372158	A2	19990811		
	US 1998-97665P	P	19980824		
	US 1998-99306P	P	19980902		
	US 2000-662135	A2	20000914		
	US 2001-770663	A3	20010129		
	WO 2001-US28598	W	20010913		
	US 2001-806	A3	20011204		

RE.CNT 125 THERE ARE 125 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 2000:489075 CAPLUS

DN 133:114389  
TI Chiral surfactants and methods for their use in chiral **separations**  
IN Mazzeo, Jeffrey R.; Grover, Edward R.; Swartz, Michael E.; Merion,  
Michael; Petersen, John S.  
PA Waters Investments Limited, USA  
SO U.S., 68 pp., Cont.-in-part of U.S. Ser. No. 124,681.  
CODEN: USXXAM  
DT Patent  
LA English  
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6090250	A	20000718	US 1996-617916	19960320
	WO 9508529	A1	19950330	WO 1994-US10655	19940920
	W: AU, CA, CN, DE, JP, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
PRAI	US 1993-124681	A2	19930920		
	WO 1994-US10655	W	19940920		
RE.CNT	49	THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD			
		ALL CITATIONS AVAILABLE IN THE RE FORMAT			

L7 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1997:134811 CAPLUS  
DN 126:199105  
TI Kinetic **Resolution** of Meso/dl **Stereoisomeric** Mixtures:  
Theory and Practice  
AU Ward, Dale E.; How, David; Liu, Yadong  
CS Department of Chemistry, University of Saskatchewan, Saskatoon, SK, S7N  
5C9, Can.  
SO Journal of the American Chemical Society (1997), 119(8), 1884-1894  
CODEN: JACSAT; ISSN: 0002-7863  
PB American Chemical Society  
DT Journal  
LA English

L7 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1996:158219 CAPLUS  
DN 124:277375  
TI **Separation** and determination of some **stereoisomers** by  
capillary gel electrophoresis with cyclodextrin incorporated in  
polyacrylamide gel  
AU Lin, Jin-Ming; Nakagama, Tatsuro; Okazawa, Hitoshi; Wu, Xing-Zheng; Hobo,  
Toshiyuki  
CS Dep. Ind. Chem., Tokyo Metropolitan Univ., Hachioji, 192-03, Japan  
SO Fresenius' Journal of Analytical Chemistry (1996), 354(4), 451-4  
CODEN: FJACES; ISSN: 0937-0633  
PB Springer  
DT Journal  
LA English

L7 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1995:713767 CAPLUS  
DN 123:111660  
TI Enantioselective preparation of optically pure albuterol via  
**resolution** of methyl 5-[2-[(1,1-dimethylethyl)amino]-1-  
hydroxyethyl]-2-hydroxybenzoate with ditoluoyltartaric acid  
IN Gao, Yun; Zepp, Charles M.  
PA Sepracor, Inc., USA  
SO U.S., 7 pp.  
CODEN: USXXAM  
DT Patent  
LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5399765	A	19950321	US 1994-247302	19940523
	US 5545745	A	19960813	US 1995-376072	19950120
	CA 2190577	AA	19951130	CA 1995-2190577	19950523
	WO 9532178	A1	19951130	WO 1995-US6539	19950523
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TT, UA				
	RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9525559	A1	19951218	AU 1995-25559	19950523
	AU 686386	B2	19980205		
	EP 763010	A1	19970319	EP 1995-919913	19950523
	EP 763010	B1	20000830		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10500954	T2	19980127	JP 1995-530513	19950523
	AT 195931	E	20000915	AT 1995-919913	19950523
	ES 2151065	T3	20001216	ES 1995-919913	19950523
	PT 763010	T	20001229	PT 1995-95919913	19950523
	GR 3034982	T3	20010228	GR 2000-402605	20001124
PRAI	US 1994-247302	A2	19940523		
	US 1995-376072	A	19950120		
	WO 1995-US6539	W	19950523		
OS	CASREACT 123:111660				

L7 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1993:234481 CAPLUS  
DN 118:234481  
TI Process for preparation of pure isomeric forms of 3,3,5-trimethylcyclohexanone and 3,3,5-trimethylcyclohexyl amino acid esters  
IN Laruelle, Claude; Lepant, Marcel  
PA Panmedica, Fr.  
SO PCT Int. Appl., 39 pp.  
CODEN: PIXXD2  
DT Patent  
LA French  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9222529	A1	19921223	WO 1992-FR546	19920617
	W: CA, JP, KR, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
	FR 2677981	A1	19921224	FR 1991-7518	19910619
	CA 2111309	AA	19921223	CA 1992-2111309	19920617
	EP 594645	A1	19940504	EP 1992-912768	19920617
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE				
PRAI	FR 1991-7518		19910619		
	WO 1992-FR546		19920617		
OS	MARPAT 118:234481				

L7 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1991:573809 CAPLUS  
DN 115:173809  
TI Gas chromatographic separation of stereoisomeric esters of  $\alpha$ -amino acids and  $\alpha$ -alkyl- $\alpha$ -amino acids on chiral stationary phases  
AU Brueckner, Hans; Langer, Matthias  
CS Inst. Food Technol., Univ. Hohenheim, Stuttgart, W-7000/70, Germany

SO Journal of Chromatography (1991), 542(1), 161-72  
CODEN: JOCRAM; ISSN: 0021-9673  
DT Journal  
LA English

L7 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 1991:429855 CAPLUS  
DN 115:29855

TI Investigation of the chiral recognition by "brush-type" phases in liquid chromatography using crystal structure analyses of diastereomeric 1:1 complexes of a  $\pi$ -donor and a  $\pi$ -acceptor derivative of leucine

AU Daepfen, Richard; Rihs, Gerty; Mayer, Carl W.  
CS Cent. Anal. Dep., Ciba-Geigy Ltd., Basel, CH-4002, Switz.  
SO Chirality (1990), 2(3), 185-9  
CODEN: CHRLEP; ISSN: 0899-0042

DT Journal  
LA English

s amlodipin?  
L1 13 AMLODIPIN?

=> d 11 1-13

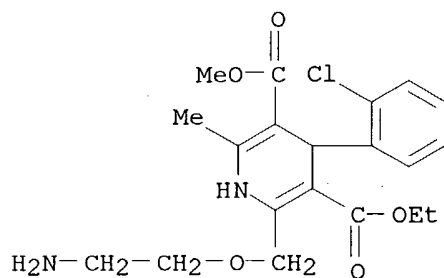
L1 ANSWER 1 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 556810-47-0 REGISTRY  
CN 3,5-Pyridinedicarboxylic acid, 2-[(2-aminoethoxy)methyl]-4-(2-chlorophenyl)-1,4-dihydro-6-methyl-, 3-ethyl 5-methyl ester, compd. with N,N-dimethylacetamide, (2R,3R)-2,3-dihydroxybutanedioate (2:2:1) (9CI)  
(CA INDEX NAME)

OTHER NAMES:

CN **Amlodipine hemitartrate dimethylacetamide monosolvate**  
FS STEREOSEARCH  
MF C20 H25 Cl N2 O5 . C4 H9 N O . 1/2 C4 H6 O6  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL

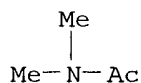
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CM 2

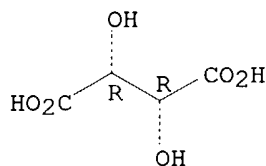
CRN 127-19-5  
CMF C4 H9 N O



CM 3

CRN 87-69-4  
CMF C4 H6 O6

Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

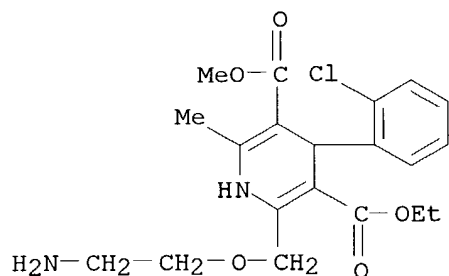
L1 ANSWER 2 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 556810-44-7 REGISTRY  
CN 3,5-Pyridinedicarboxylic acid, 2-[(2-aminoethoxy)methyl]-4-(2-chlorophenyl)-1,4-dihydro-6-methyl-, 3-ethyl 5-methyl ester, (2R,3R)-2,3-dihydroxybutanedioate (2:1) (9CI) (CA INDEX NAME)

OTHER NAMES:

CN **Amlodipine hemitartrate**  
FS STEREOSEARCH  
MF C20 H25 Cl N2 O5 . 1/2 C4 H6 O6  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL

CM 1

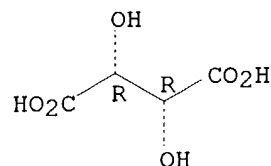
CRN 88150-42-9  
CMF C20 H25 Cl N2 O5



CM 2

CRN 87-69-4  
CMF C4 H6 O6

Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L1 ANSWER 3 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 556025-07-1 REGISTRY  
CN 3,5-Pyridinedicarboxylic acid, 2-[(2-aminoethoxy)methyl]-4-(2-chlorophenyl)-1,4-dihydro-6-methyl-, 3-ethyl 5-methyl ester, (4R)-, compd. with N,N-dimethylacetamide, (2R,3R)-2,3-dihydroxybutanedioate (2:2:1) (9CI) (CA INDEX NAME)

OTHER NAMES:

CN **R-(+)-Amlodipine L-hemitartrate dimethylacetamide monosolvate**  
FS STEREOSEARCH  
MF C20 H25 Cl N2 O5 . C4 H9 N O . 1/2 C4 H6 O6

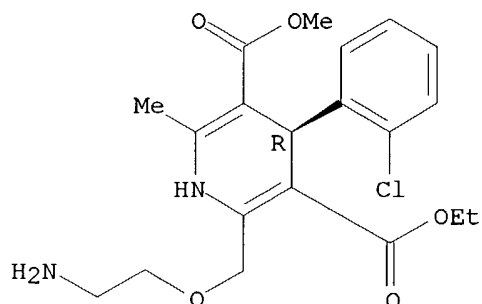


SR CA  
LC STN Files: CA, CAPLUS, USPATFULL

CM 1

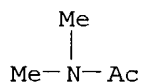
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Absolute stereochemistry. Rotation (+).



CM 2

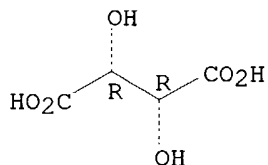
CRN 127-19-5  
CMF C4 H9 N O



CM 3

CRN 87-69-4  
CMF C4 H6 O6

Absolute stereochemistry.



1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L1 ANSWER 4 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 518290-97-6 REGISTRY  
CN 3,5-Pyridinedicarboxylic acid, 2-[(2-aminoethoxy)methyl]-4-(2-chlorophenyl)-1,4-dihydro-6-methyl-, 3-ethyl 5-methyl ester, (4S)-, compd. with N,N-dimethylacetamide, (2S,3S)-2,3-dihydroxybutanedioate (2:2:1) (9CI) (CA INDEX NAME)

OTHER NAMES:

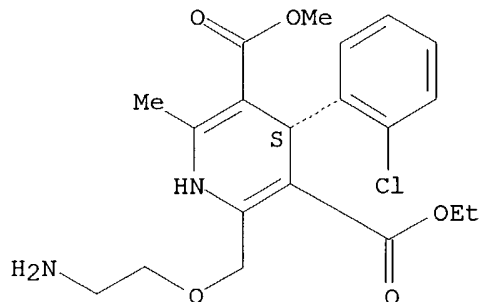
CN S-(-)-Amlodipine D-hemitartrate dimethylacetamide monosolvate

FS STEREOSEARCH  
MF C20 H25 Cl N2 O5 . C4 H9 N O . 1/2 C4 H6 O6  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL

CM 1

CRN 103129-82-4  
CMF C20 H25 Cl N2 O5

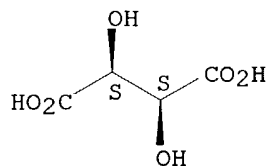
Absolute stereochemistry. Rotation (-).



CM 2

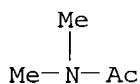
CRN 147-71-7  
CMF C4 H6 O6

Absolute stereochemistry.



CM 3

CRN 127-19-5  
CMF C4 H9 N O



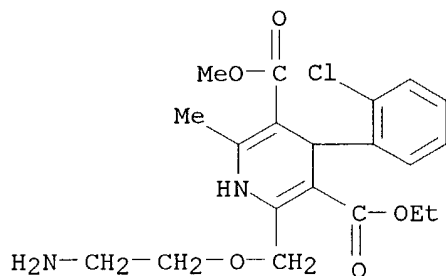
2 REFERENCES IN FILE CA (1907 TO DATE)  
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L1 ANSWER 5 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 440358-84-9 REGISTRY  
CN 3,5-Pyridinedicarboxylic acid, 2-[(2-aminoethoxy)methyl]-4-(2-chlorophenyl)-1,4-dihydro-6-methyl-, 3-ethyl 5-methyl ester, monomethanesulfonate, monohydrate (9CI) (CA INDEX NAME)  
OTHER NAMES:

CN **Amlodipine mesylate monohydrate**  
 MF C20 H25 Cl N2 O5 . C H4 O3 S . H2 O  
 SR CA  
 LC STN Files: CA, CAPLUS

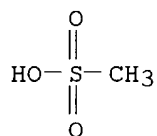
CM 1

CRN 88150-42-9  
 CMF C20 H25 Cl N2 O5



CM 2

CRN 75-75-2  
 CMF C H4 O3 S



1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L1 ANSWER 6 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN 357437-90-2 REGISTRY  
 CN 3,5-Pyridinedicarboxylic acid, 2-[(2-aminoethoxy)methyl]-4-(2-chlorophenyl)-1,4-dihydro-6-methyl-, 3-ethyl 5-methyl ester, mixt. with (3S)-3-[[[(1S)-1-(ethoxycarbonyl)-3-phenylpropyl]amino]-2,3,4,5-tetrahydro-2-oxo-1H-1-benzazepine-1-acetic acid (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

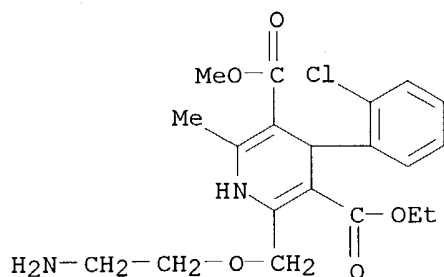
CN 1H-1-Benzazepine-1-acetic acid, 3-[[[(1S)-1-(ethoxycarbonyl)-3-phenylpropyl]amino]-2,3,4,5-tetrahydro-2-oxo-, (3S)-, mixt. contg. (9CI)

OTHER NAMES:

CN **Benazepril-amlodipine**  
 CN Lotrel  
 FS STEREOSEARCH  
 MF C24 H28 N2 O5 . C20 H25 Cl N2 O5  
 CI MXS  
 SR CA  
 LC STN Files: BIOSIS, CA, CAPLUS, TOXCENTER

CM 1

CRN 88150-42-9  
 CMF C20 H25 Cl N2 O5

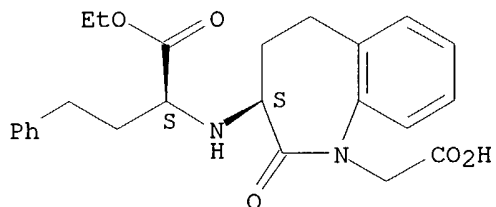


CM 2

CRN 86541-75-5

CMF C24 H28 N2 O5

Absolute stereochemistry.



6 REFERENCES IN FILE CA (1907 TO DATE)

6 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L1 ANSWER 7 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN

RN 246852-12-0 REGISTRY

CN 3,5-Pyridinedicarboxylic acid, 2-[(2-aminoethoxy)methyl]-4-(2-chlorophenyl)-1,4-dihydro-6-methyl-, 3-ethyl 5-methyl ester, monomethanesulfonate (9CI) (CA INDEX NAME)

OTHER NAMES:

CN **Amlodipine mesylate**

MF C20 H25 Cl N2 O5 . C H4 O3 S

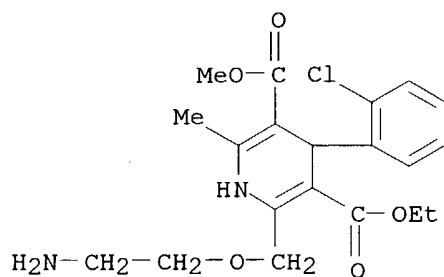
SR CA

LC STN Files: BIOSIS, CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL

CM 1

CRN 88150-42-9

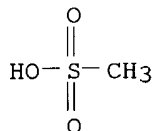
CMF C20 H25 Cl N2 O5



CM 2

CRN 75-75-2

CMF C H4 O3 S



7 REFERENCES IN FILE CA (1907 TO DATE)

7 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L1 ANSWER 8 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN

RN 150566-71-5 REGISTRY

CN 3,5-Pyridinedicarboxylic acid, 2-[(2-aminoethoxy)methyl]-4-(2-chlorophenyl)-1,4-dihydro-6-methyl-, 3-ethyl 5-methyl ester, (4S)-, monobenzenesulfonate (9CI) (CA INDEX NAME)

OTHER NAMES:

CN **(-)-Amlodipine besylate**

FS STEREOSEARCH

MF C20 H25 Cl N2 O5 . C6 H6 O3 S

SR CA

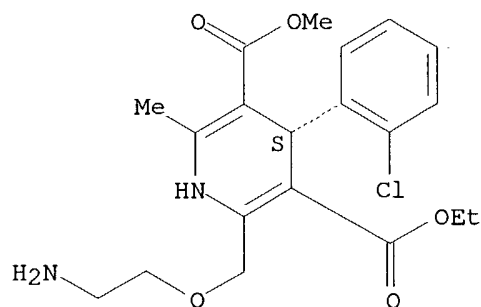
LC STN Files: CA, CAPLUS, IMSPATENTS, IMSRESEARCH, USPAT2, USPATFULL

CM 1

CRN 103129-82-4

CMF C20 H25 Cl N2 O5

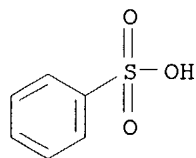
Absolute stereochemistry. Rotation (-).



CM 2

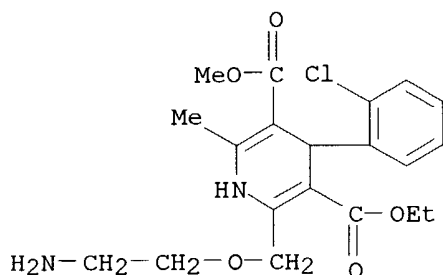
CRN 98-11-3

CMF C6 H6 O3 S



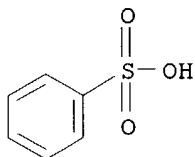
4 REFERENCES IN FILE CA (1907 TO DATE)  
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L1 ANSWER 9 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 111470-99-6 REGISTRY  
CN 3,5-Pyridinedicarboxylic acid, 2-[(2-aminoethoxy)methyl]-4-(2-chlorophenyl)-1,4-dihydro-6-methyl-, 3-ethyl 5-methyl ester, monobenzenesulfonate (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN Benzenesulfonic acid, compd. with 3-ethyl 5-methyl 2-[(2-aminoethoxy)methyl]-4-(2-chlorophenyl)-1,4-dihydro-6-methyl-3,5-pyridinedicarboxylate (1:1)  
OTHER NAMES:  
CN (±)-3-Ethyl 5-methyl 2-[(2-aminoethoxy)methyl]-4-(2-chlorophenyl)-1,4-dihydro-6-methyl-3,5-pyridinedicarboxylate monobenzenesulfonate  
CN Amcard  
CN Amdepin  
CN Amdipin  
CN Amlodin  
CN **Amlodipine benzenesulfonate**  
CN **Amlodipine benzenesulfonate salt**  
CN **Amlodipine besylate**  
CN Amlopin  
CN Amlor  
CN Amlosyn  
CN Antacal  
CN Calchek  
CN Istin  
CN Lowrac  
CN Monopina  
CN Norvas  
CN Norvasc  
CN Norvask  
CN Tensivask  
CN UK 48340-26  
DR 115633-24-4, 156366-25-5  
MF C20 H25 Cl N2 O5 . C6 H6 O3 S  
CI COM  
SR CAS Client Services  
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CIN, CSCHEM, DIOGENES, EMBASE, HSDB\*, IMSCOSEARCH, IMSDRUGNEWS, IMSPATENTS, IMSRESEARCH, IPA, MRCK\*, PHAR, PROMT, RTECS\*, TOXCENTER, USAN, USPAT2, USPATFULL  
(\*File contains numerically searchable property data)  
  
CM 1  
  
CRN 88150-42-9  
CMF C20 H25 Cl N2 O5



CM 2

CRN 98-11-3  
CMF C6 H6 O3 S

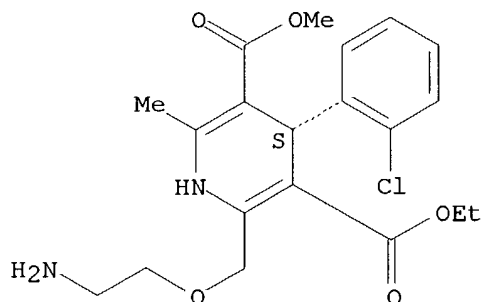


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

153 REFERENCES IN FILE CA (1907 TO DATE)  
5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
154 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L1 ANSWER 10 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 103129-82-4 REGISTRY  
CN 3,5-Pyridinedicarboxylic acid, 2-[(2-aminoethoxy)methyl]-4-(2-chlorophenyl)-1,4-dihydro-6-methyl-, 3-ethyl 5-methyl ester, (4S)- (9CI)  
(CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 3,5-Pyridinedicarboxylic acid, 2-[(2-aminoethoxy)methyl]-4-(2-chlorophenyl)-1,4-dihydro-6-methyl-, 3-ethyl 5-methyl ester, (S)-  
OTHER NAMES:  
CN (-)-Amlodipine  
CN (S)-(-)-Amlodipine  
CN (S)-Amlodipine  
CN 1-Amlodipine  
FS STEREOSEARCH  
DR 150566-70-4  
MF C20 H25 Cl N2 O5  
CI COM  
SR CA  
LC STN Files: ADISNEWS, ANABSTR, BEILSTEIN\*, BIOSIS, CA, CAPLUS, CASREACT, CEN, IMSDRUGNEWS, IMSPATENTS, IMSRESEARCH, IPA, PHAR, PROMT, TOXCENTER, USPAT2, USPATFULL  
(\*File contains numerically searchable property data)

Absolute stereochemistry. Rotation (-).

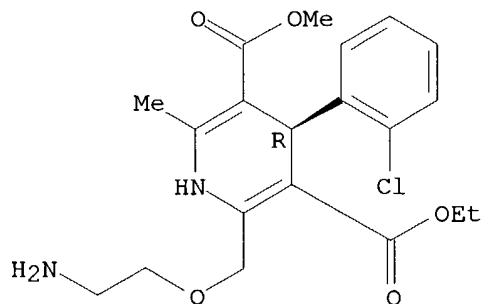


**\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\***

46 REFERENCES IN FILE CA (1907 TO DATE)  
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
46 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L1 ANSWER 11 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 103129-81-3 REGISTRY  
CN 3,5-Pyridinedicarboxylic acid, 2-[(2-aminoethoxy)methyl]-4-(2-chlorophenyl)-1,4-dihydro-6-methyl-, 3-ethyl 5-methyl ester, (4R)- (9CI)  
(CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 3,5-Pyridinedicarboxylic acid, 2-[(2-aminoethoxy)methyl]-4-(2-chlorophenyl)-1,4-dihydro-6-methyl-, 3-ethyl 5-methyl ester, (R)-  
OTHER NAMES:  
CN **(+)-Amlodipine**  
CN **(R)-(+)-Amlodipine**  
CN **(R)-Amlodipine**  
CN **d-Amlodipine**  
FS STEREOSEARCH  
MF C20 H25 Cl N2 O5  
CI COM  
SR CA  
LC STN Files: ADISNEWS, ANABSTR, BEILSTEIN\*, BIOSIS, CA, CAPLUS, CASREACT, IMPSPATENTS, PROMT, USPAT2, USPATFULL  
(\*File contains numerically searchable property data)

Absolute stereochemistry. Rotation (+).



**\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\***

41 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
41 REFERENCES IN FILE CAPLUS (1907 TO DATE)

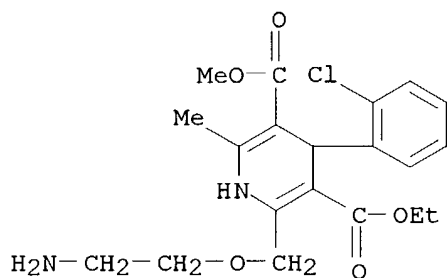
L1 ANSWER 12 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 88150-47-4 REGISTRY  
CN 3,5-Pyridinedicarboxylic acid, 2-[(2-aminoethoxy)methyl]-4-(2-chlorophenyl)-1,4-dihydro-6-methyl-, 3-ethyl 5-methyl ester, (2Z)-2-butenedioate (1:1) (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 3,5-Pyridinedicarboxylic acid, 2-[(2-aminoethoxy)methyl]-4-(2-chlorophenyl)-1,4-dihydro-6-methyl-, 3-ethyl 5-methyl ester, (Z)-2-butenedioate (1:1)  
OTHER NAMES:



CN **Amlodipine maleate**  
 CN UK 48340-11  
 FS STEREOSEARCH  
 DR 135877-50-8  
 MF C20 H25 Cl N2 O5 . C4 H4 O4  
 LC STN Files: BEILSTEIN\*, BIOSIS, CA, CAPLUS, CASREACT, CHEMCATS, CIN,  
 HSDB\*, IMSPATENTS, IPA, MRCK\*, PHAR, TOXCENTER, USAN, USPAT2, USPATFULL  
 (\*File contains numerically searchable property data)

CM 1

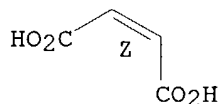
CRN 88150-42-9  
 CMF C20 H25 Cl N2 O5



CM 2

CRN 110-16-7  
 CMF C4 H4 O4

Double bond geometry as shown.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

31 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 31 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L1 ANSWER 13 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN 88150-42-9 REGISTRY  
 CN 3,5-Pyridinedicarboxylic acid, 2-[(2-aminoethoxy)methyl]-4-(2-chlorophenyl)-1,4-dihydro-6-methyl-, 3-ethyl 5-methyl ester (9CI) (CA INDEX NAME)

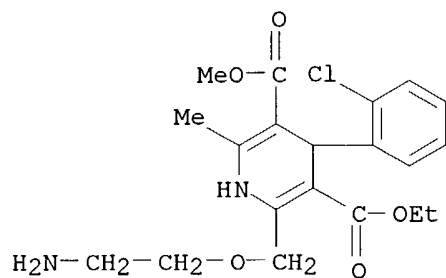
OTHER NAMES:

CN **Amlodipine**  
 CN Pelmec  
 CN **Racemic Amlodipine**  
 FS 3D CONCORD  
 DR 103069-18-7  
 MF C20 H25 Cl N2 O5  
 CI COM  
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS,

BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CIN,  
 CSCHEM, DDFU, DIOGENES, DRUGU, EMBASE, HSDB\*, IMSPATENTS, IPA, MEDLINE,  
 MRCK\*, PHAR, PROMT, RTECS\*, SYNTHLINE, TOXCENTER, USAN, USPAT2,  
 USPATFULL, VETU

(\*File contains numerically searchable property data)

Other Sources: WHO



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1177 REFERENCES IN FILE CA (1907 TO DATE)

19 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

1179 REFERENCES IN FILE CAPLUS (1907 TO DATE)